

Purine Alkaloids

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

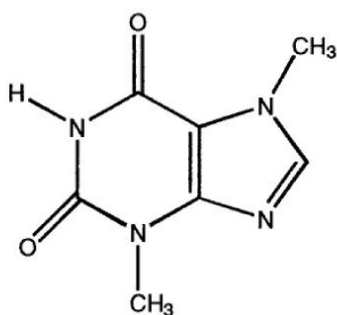
Abstract

This application brief highlights the analysis of Purine Alkaloids using Symmetry Shield Columns.

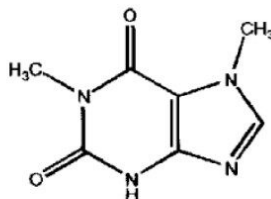
Introduction

The compounds analyzed in this study are:

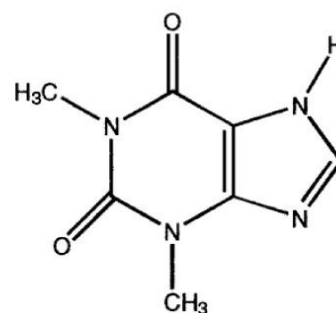
1. Theobromine
2. Paraxanthine
3. Theophylline
4. β -hydroxyethyltheophylline (I.S.)
5. Caffeine



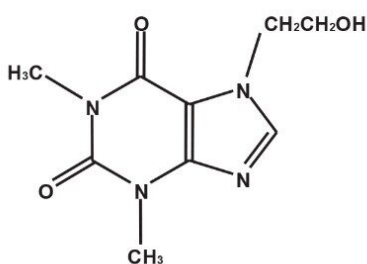
1. Theobromine



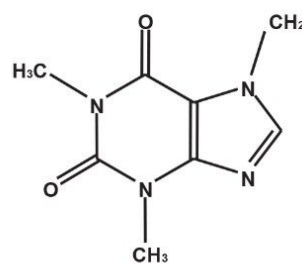
2. Paraxanthine



3. Theophylline



4. β -hydroxyethyltheophylline (I.S.)



5. Caffeine

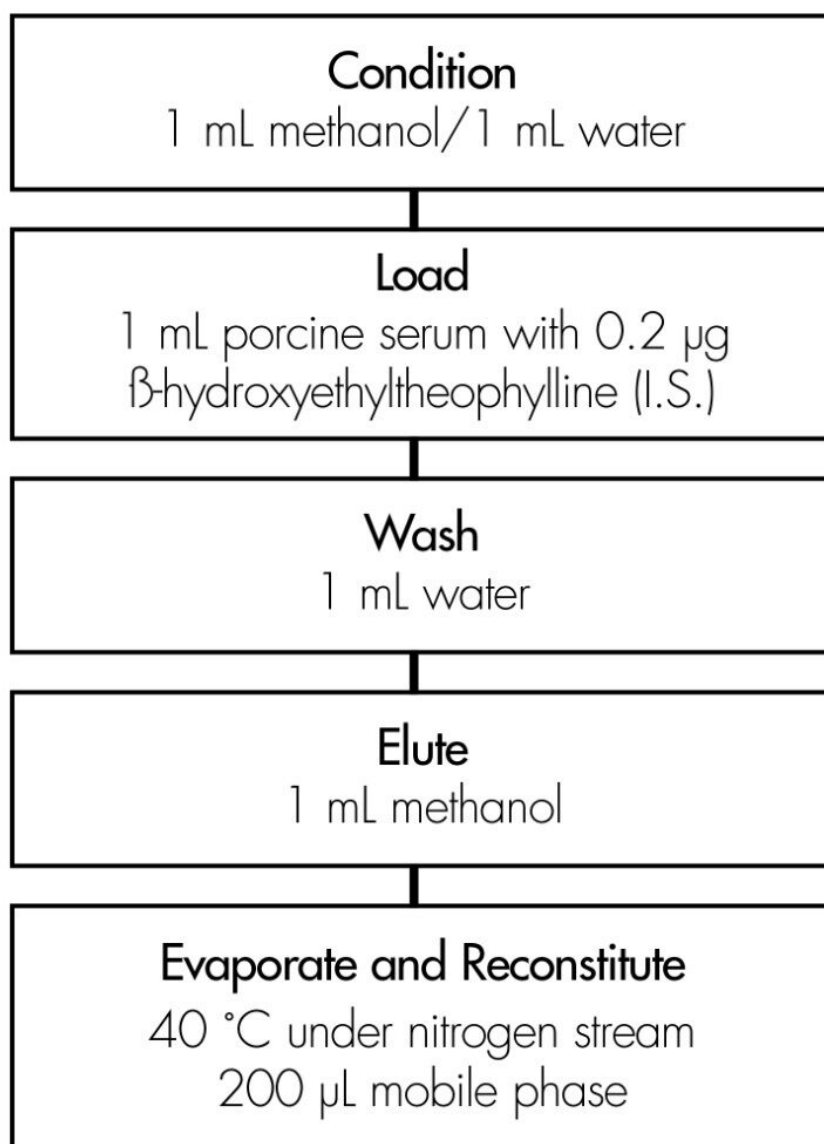
Experimental

HPLC Method

| | |
|-------------------|--|
| Column: | Symmetry Shield RP ₈ , 3.9 x 150 mm, 5 μm |
| Guard column: | Symmetry Guard Column, 3.9 x 20 mm, 5 μm |
| Part numbers: | Column - WAT094243, Guard - WAT200675 |
| Mobile phase: | 20 mM potassium phosphate, pH 5/methanol 95:5 |
| Flow rate: | 0.6 mL/min |
| Injection volume: | 20 μL of reconstituted porcine serum extract |
| Detection: | UV @ 273 nm |

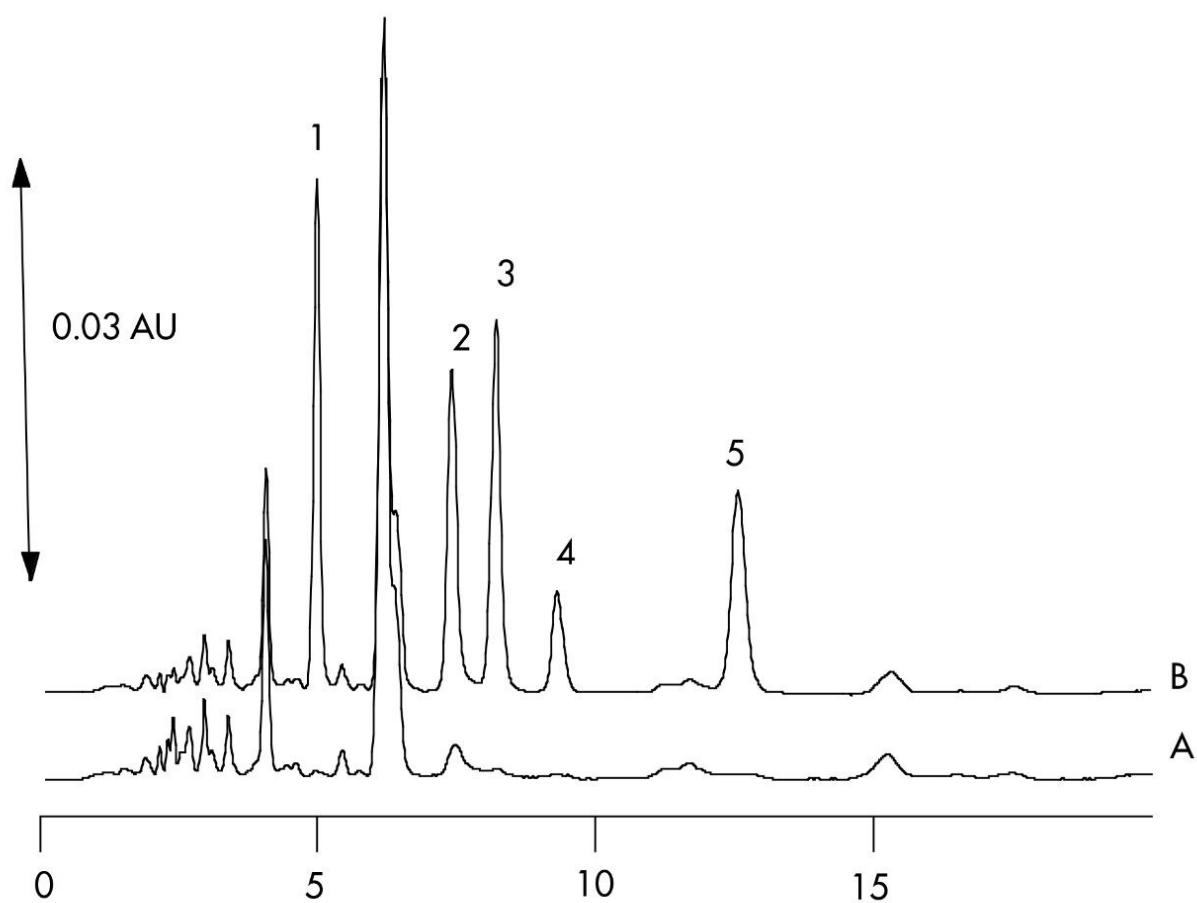
Oasis® HLB Extraction Method

Oasis® HLB 1 cc/30 mg Extraction Cartridge
Part Number WAT094225



Results and Discussion

| Compounds | % Recovery \pm % RSD |
|----------------|------------------------|
| 1. Benomyl | 65 \pm 10 |
| 2. Carbaryl | N/A |
| 3. Atrazine | N/A |
| 4. Bisphenol A | 83 \pm 2 |



Chromatogram of Serum Extracts: A) Blank B) Spiked Sample.

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